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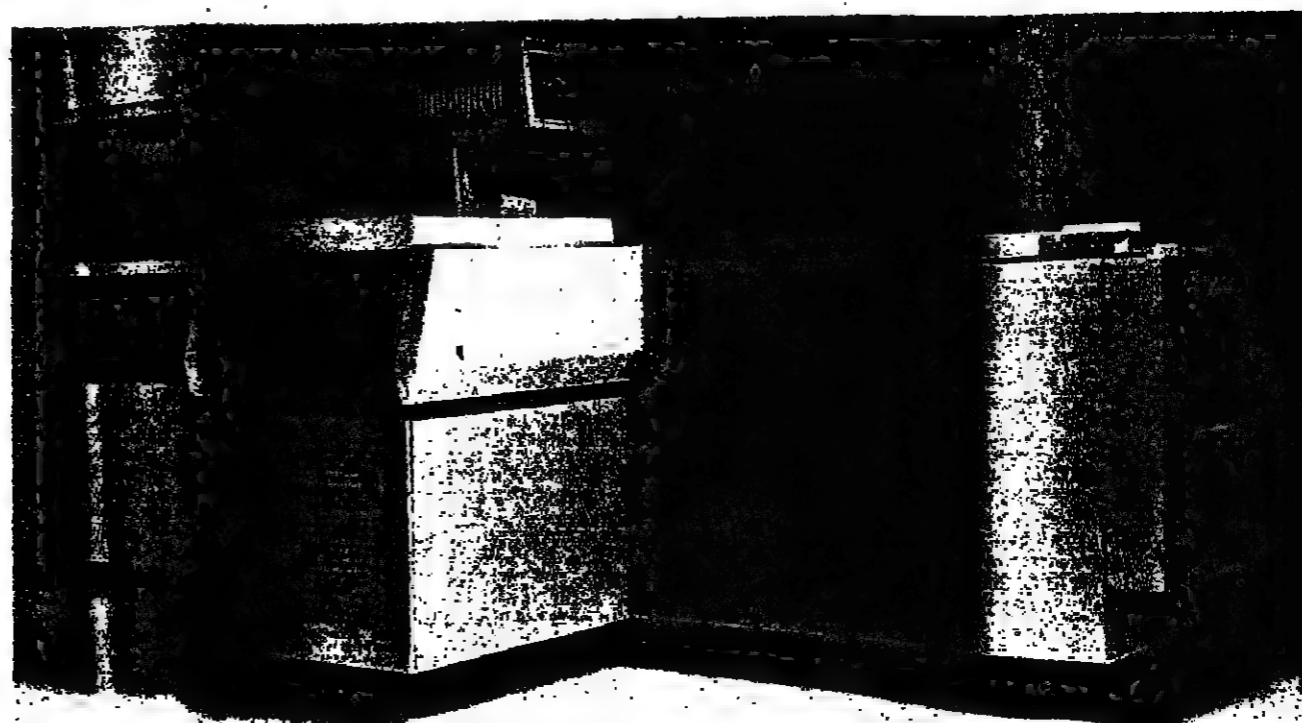
still produces very high quality prints comparable with any offset printer.

Nevertheless, it's not a system that will suit everyone. Only a company with enough of the right kind of work will want it.

But for those people it could make a big difference.

The difference between talking about productivity and achieving it.

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FINANCIAL TIMES SURVEY

Tuesday September 23 1975

DATA PROCESSING

For a country with the design and manufacturing capabilities of Britain, the performance of the country's computer companies remains disappointing. With rapid changes in demand, a major problem is to respond to changes in technology.

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LONG last the U.K. after producing industry appear to be shifting out of deep deficit, or so the recent trade figures indi-

ports in the first half of year at £154.8m. were used by imports at £186.7m. at the deficit came to £31.9m. compared with £39.3m. in the corresponding period of 1974. Taking inflation and the hard course of sterling in mind, this is no mean achievement. But while it may ease the sponsoring of the deficit is still far too large for a country with the manufacturing capabilities of Britain. It is still incurred because too little manufacturing, taking in-made components and assemblies, is being carried in Britain and any further loss of sterling against overseas currencies will only underline that point.

For U.K. users, the prime concern is that hardware, maintenance and software costs may continue to increase and—after some recent analyses of what to expect on the computer front, made by U.S. experts—they must wonder whether their present equipment will continue to be supported in a few years from now.

Possibly the gloomiest predictions come from Shearson Hayden Stone of the New York Stock Exchange. This firm defines three cardinal errors, any one of which is fatal to the computer company making it: concentration on too narrow a product range, maintaining an obsolescent technology and persisting with a non-compatible line or lines.

Every U.S. company except IBM and Burroughs is seen by it to be guilty of one or more of these errors, with poor profit margins and low returns on assets as a result, and a demise concerning which only the ultimate date is in doubt.

CDC is judged by the firm to have too narrow a range and the sole option of concentrating on peripherals. Honeywell has "compounded an irrational product line" by taking over another non-compatible line (GE), and is forced to maintain old and new lines so that higher costs "coupled with departing customers put the company in the red."

Sperry Rand was also saddled with obsolescence and a product line burdened from elsewhere and while the situation was not yet severe, profit margins and cash



Three visual displays on a Honeywell 58 computer.

flow were too low to be comfortable in a high technology industry.

NCR's undoubted success in point of sale (POS) equipment was also seen with a jaundiced eye because of general competition from other computer companies, and from a host of newcomers in an area where technology is making giant strides. If the criteria laid down by the stockbrokers are applied in Europe—to the changes that giant companies integrating Unidata and to ICL can ring, especially with the

newly-found versatility of large scale integrated circuits and microcomputers.

One factor alone can alter the position in Europe and that is the degree of determination of respective Governments to keep alive their domestic industries. One has seen in the past few months where the sticking point came for France. But if the brokers' predictions are only half true, that is, if it is going to take Honeywell years to return to the affluence of

started on the crux of the data processing problem which is the provision of an adequate local minicomputer industry, the fostering of a peripherals expertise and the creation of an infrastructure able to provide the sub-assemblies and high technology components which are essential to a successful computing industry.

Pressure

Users may be more aware of the possible problems than the ever-changing array of civil servants responsible for sponsoring the industry. The emergence of a general computer users' group built around the various user pressure groups corresponding to the separate manufacturers and the National Computing Centre is of the highest significance.

It can exert far greater pressure politically than could the software industry, for example, when it existed as a separate entity and was pressing for more Government support in the form of contracts and for a definite statement of policy.

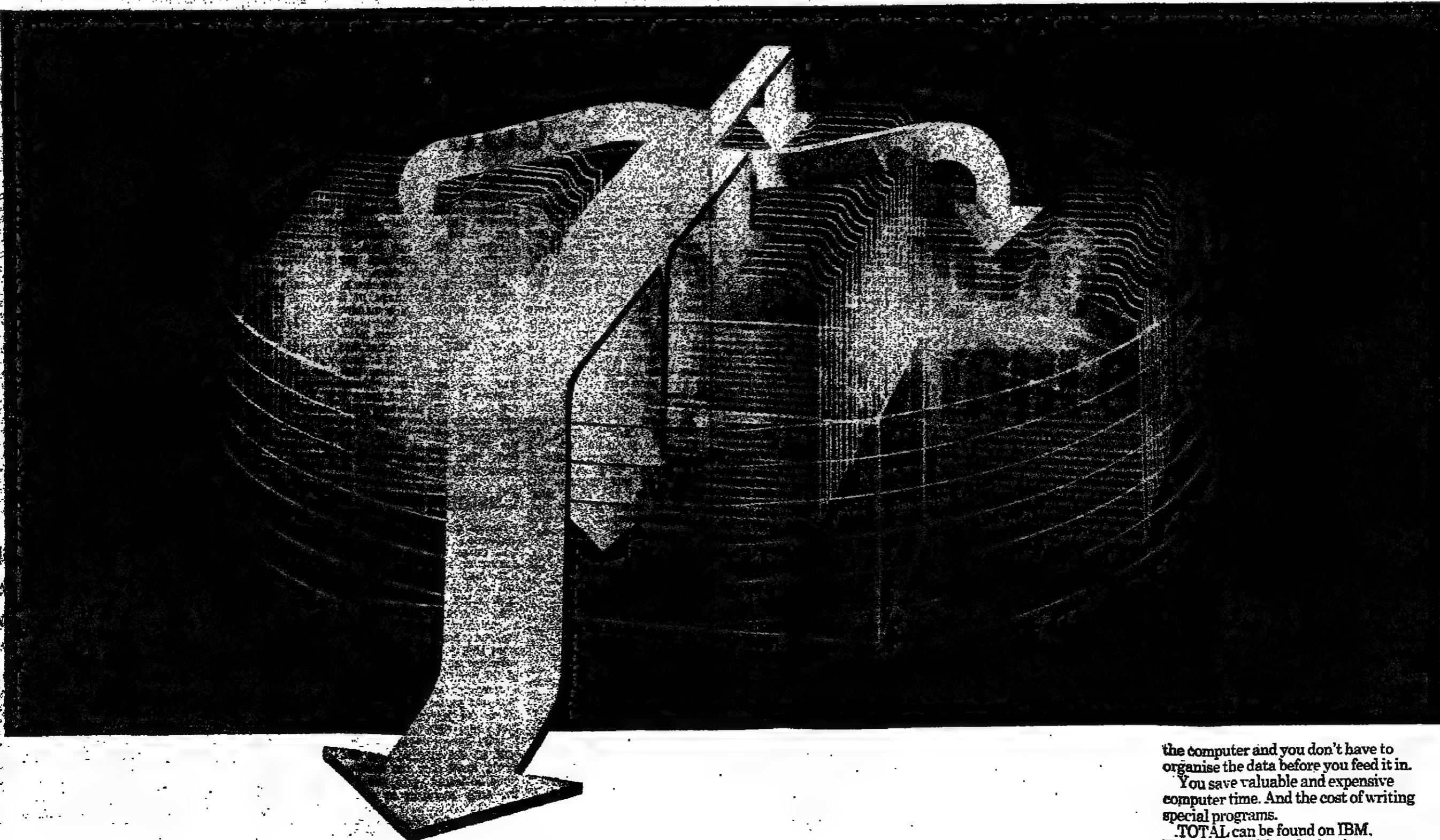
The consequences of the disappearance or merging of a large multi-national computer group at this stage of the game where computers are so highly integrated into the structure of many companies that a bad failure and loss of data can spell thousands of pounds of unforeseen expense are too severe to be ignored.

—continuity of equipment support which, on this side of the Atlantic, demands firm Government assurances for the survival of ICL even though the latter's leaders say, or said, that by 1976 support would no longer be needed.

Another aspect of security is that of the information handled by the equipment which is under attack all the time either for fraudulent purposes or for abstracting facts which the intervenor is not entitled to know. The situation in the U.S. is bad, with an estimated total of over 300 frauds involving computers in 1974 each averaging around £1m. Particularly difficult to unravel, even by experts who know the system which has been tampered with, the computerised fraud is causing concern to the U.K. National Computing Centre. It has already offered advisory services to companies who want to ensure that their equipment and the facts it is handling are safe and will remain so. It is now joining with the Institute of Chartered Secretaries and Administrators to run a series of seminars on the topic for senior management, data processing management, auditors and company secretaries as well as insurance specialists.

One task for the seminars is to identify the various ways in which losses can occur, particularly important at a time when the experts themselves disagree as to whether the threat is increasing or not.

Ted Schoeters



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Effort

In the current state of play, the public need only keep a clean record with the accounts departments or credit card agency to be sure that the terminal will respond positively when central records are checked. But this still means some processing effort to keep this central record closely tracking the current financial state of each customer. The current needs of both banks and stores call for further integration will take place, but there can be no uncertainty outside of legislation that this will not happen under changed cost factors of computing as against other costs.

For the office, however, the

An avowed computer-based unit which is working in a typing pool of Unilever's organizational division stems from an internal specification. The implementation of the specification was given to Logica, a systems and software house, and the hardware was obtained mainly from Cossor Raytheon. But the excitement of this system—which basically uses typists to file their words into a computer store which then rips out a draft and when this is amended processes the changes and finally types a perfect script—lives in the delight the typists take in using it. Few are productively in the office are thoroughly better to work with although most have some to recommend them. But the Unilever staff seem to enjoy taking a closer interest in the purposes

pendent

...nally associated to this or great importance in social contexts is the much independent attitude of bureau operators in general as equipment suppliers, as it would be hard to get years of immaturity contempt, but it is evident one who knows the industry that a bureau operator, bread and butter it is to its machine as fully loaded sible round the clock, is at to listen to a sales pitch, ates with caution and then when a worthwhile interest and return is and frequently goes into where the manufacturer isen unable to go.

... consequence of this is ability of many bureaux to services from nearby ies management and takeover of under-ved equipment from e firms. It has already ound in the past that is a of recessions, when nent purchased by private ies and Government are leg back, any extra load ing from increasing use of e facilities tends to be

...nances, albeit 1980 is smaller organisations than the international component giants. Whatever the reasons, remain-bering that only one U.K. com-pany has a development pro-gramme in micros it may be as hard to convince potential Euro-pean partners that U.K. con-cern for a European presence in this vitally important area is genuine as it was to con-vince General de Gaulle that Britain would not at some stage favour Commonwealth or U.S. links to the detriment of Europe.

...d how important the micro-processor side is can be seen from a glance at the list of U.S. car manufacturers and universi-ties in America studying how to use them as controllers of vir-tually everything under the car bonnet so as to cut fuel con-sumption and reduce exhaust pollution.

... At present, General Motors and MIT's Innovation Centre appear to have gone further than anyone else. Application on a broad front can only be months away and a very large market is in development, de-spite the depressed state of the motor industry. The question is what part of it European suppliers will be able to claim.

Ted Schoeters

Currently, the few research staff working in the most glamorous laboratories of the U.S. are the only real exploiters of the text handling capabilities of the computer when properly aimed at this target. Recently, Dick Hamming of Bell Labs revealed that a book he is writing on a topic of importance to electrical design engineers is in draft in a computer. The computer does all the hard work. Especially impressive in this connection is its ability to turn out perfectly organized script covering elaborate mathematical notation from rudimentary indications, typed in at a normal keyboard. This current ability

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